

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the present application:

**Listing of Claims:**

1–8. (Cancelled)

9. (Currently Amended) A screening method for substances that have a candidate antidiabetic substance, said method a mechanism of pharmacological action similar to that of pioglitazone, comprising the steps of:

bringing a candidate antidiabetic substance to be screened into contact with a target protein represented by the following (a) or (b), wherein said candidate substance is a substance that has not yet been determined to be an antidiabetic:

(a) a target protein consisting of the amino acid sequence represented by SEQ ID

NO: 2 which is capable of interacting with a thiazolidine derivative selected from the group consisting of pioglitazone, rosiglitazone, trolitazone or ciglitazone; or

(b) a target protein consisting of an amino acid sequence derived from the amino acid sequence represented by SEQ ID NO: 2 (i) with the addition of one or plural amino acids and/or or (ii) with the deletion, substitution, or insertion of one to thirty amino acids, wherein said target protein retains the capability to interact with a thiazolidine derivative selected from the group consisting of pioglitazone, rosiglitazone, trolitazone or ciglitazone; [[and]]

screening for the presence or absence of any interaction between the candidate antidiabetic substance and the target protein represented by (a) or (b); and  
determining that the candidate antidiabetic substance has a pharmacological action similar to that of the thiazolidine derivative.

10-22. (Cancelled)

23. (Currently Amended) A screening method for substances that have a candidate antidiabetic substance, said method a mechanism of pharmacological action similar to that of pioglitazone, comprising the steps of:

bringing a candidate substance to be screened into contact with a target protein comprising the amino acid sequence represented by SEQ ID NO: 2 which is capable of interacting with a thiazolidine derivative selected from the group consisting of pioglitazone, rosiglitazone, trolitazone or ciglitazone, wherein said candidate substance is a substance that has not yet been determined to be an antidiabetic; [[and]]

screening for the presence or absence of any interaction between the candidate antidiabetic substance and the target protein; and

determining that the candidate antidiabetic substance has a pharmacological action similar to that of the thiazolidine derivative.

24. (Currently Amended) [[A]] The screening method according to claim 9, wherein said candidate substance is a low molecular weight compound.

25. (Currently Amended) [[A]] The screening method according to claim 9, wherein said candidate substance is a protein.

26. (Currently Amended) [[A]] The screening method according to claim 23, wherein said candidate substance is a low molecular weight compound.

27. (Currently Amended) [[A]] The screening method according to claim 23, wherein said candidate substance is a protein.

28. (Currently Amended) [[A]] The screening method according to claim 9, wherein said protein is immobilized on a substrate and said candidate substance is brought into contact with said immobilized protein in order to measure the capability of said candidate substance to interact with said protein.

29. (Currently Amended) [[A]] The screening method according to claim 23, wherein said protein is immobilized on a substrate and said candidate substance is brought into contact with said immobilized protein in order to measure the capability of said candidate substance to interact with said protein.

30. (Previously Presented) A screening method according to claim 28, wherein said substrate is a chip.

31. (Currently Amended) [[A]] The screening method according to claim 29, wherein said substrate is a chip.

32. (Currently Amended) [[A]] The screening method according to claim 9, wherein said thiazolidine derivative is pioglitazone.

33. (Currently Amended) [[A]] The screening method according to claim 23, wherein said thiazolidine derivative is pioglitazone.

34. (Currently Amended) [[A]] The screening method according to claim 32, wherein said screening is performed by surface plasmon resonance.

35. (Currently Amended) [[A]] The screening method according to claim 33, wherein said screening is performed by surface plasmon resonance.

36. (Currently Amended) [[A]] The screening method according to claim 9, wherein said protein is protein (b) and wherein said deletion, substitution, or insertion is of one to ten amino acids.

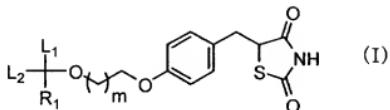
37. (Currently Amended) [[A]] The screening method according to claim 9, wherein said protein is protein (b) and wherein said deletion, substitution, or insertion is of one to five amino acids.

38. (Currently Amended) [[A]] The screening method according to claim 9, wherein said protein is said protein (a).

39. (Currently Amended) [[A]] The screening method according to claim 32, wherein said protein is said protein (a).

40-41. (Canceled)

42. (New) The screening method according to claim 9, wherein the candidate antidiabetic substance is represented by the general formula (I):

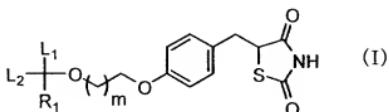


wherein R<sub>1</sub> is hydrogen, a C<sub>1-10</sub> alkyl group, a C<sub>3-7</sub> cycloalkyl group, a C<sub>7-11</sub> phenylalkyl group, a phenyl group, or a five- or six-membered heterocyclic ring comprising 1 or 2 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur;

L<sub>1</sub> and L<sub>2</sub> are identical or different and are each independently hydrogen or a C<sub>1-3</sub> alkyl group or together to form a C<sub>2-6</sub> cycloalkyl group; and

m represents any integer from 1 to 5.

43. (New) The screening method according to claim 23, wherein said candidate antidiabetic substance is represented by the general formula (I):



wherein R<sub>1</sub> is hydrogen, a C<sub>1-10</sub> alkyl group, a C<sub>3-7</sub> cycloalkyl group, a C<sub>7-11</sub> phenylalkyl group, a phenyl group, or a five- or six-membered heterocyclic ring comprising 1 or 2 heteroatoms selected from the group consisting of nitrogen, oxygen, and sulfur;

L<sub>1</sub> and L<sub>2</sub> are identical or different and are each independently hydrogen or a C<sub>1-3</sub> alkyl group or together to form a C<sub>2-6</sub> cycloalkyl group; and

m represents any integer from 1 to 5.

44. (New) A screening method for a candidate antidiabetic substance, said method comprising the steps of:

bringing a candidate antidiabetic substance to be screened into contact with a target protein represented by the following (a) or (b), wherein said candidate substance is a substance that has not yet been determined to be an antidiabetic:

(a) a target protein consisting of the amino acid sequence represented by SEQ ID NO: 2 which is capable of interacting with a thiazolidine derivative selected from the group consisting of pioglitazone, rosiglitazone, trolitazone or ciglitazone; or

(b) a target protein consisting of an amino acid sequence derived from the amino acid sequence represented by SEQ ID NO: 2, wherein the derived amino acid sequence has at least 90% homology with SEQ ID NO: 2 and retains the capability to interact with a thiazolidine derivative;

screening for the presence or absence of any interaction between the candidate antidiabetic substance and the target protein represented by (a) or (b); and

determining that the candidate antidiabetic substance has a pharmacological action similar to that of the thiazolidine derivative.